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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.		
10/720,634	11/24/2003	Erik Surewaard	81044753	4266		
28549	7590	04/30/2008	EXAMINER			
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ART UNIT		PAPER NUMBER				
3681						
MAIL DATE		DELIVERY MODE				
04/30/2008		PAPER				

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ERIC SUREWAARD, DON A. KEEES, DANIEL KOK,
ENGBERT SPIJKER, and MARK EIFERT

Appeal 2007-4401
Application 10/720,634
Technology Center 3600

Decided: April 30, 2008

Before WILLIAM F. PATE, III, DAVID B. WALKER, and BIBHU R.
MOHANTY, *Administrative Patent Judges*.

PATE, III, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

This is an appeal from the final rejection of claims 9-11. These are the only claims remaining in the application.

We have jurisdiction under 35 U.S.C. §§ 134 and 6.

The claimed invention is a method for shutting down and locking an internal combustion engine wherein the engine is placed in a predetermined rest position and wherein the starting torque is decreasing during the first phase of the restart. Appellants disclose that the torque necessary to crank the engine is optimized when the engine is started when the first cylinder is at a crank angle of about -45° where 0° is the TDC firing position of the first cylinder. See Specification at 7 and Figures 4 and 5. Appellants emphasize that this is on the compression stroke of the first cylinder.

Claim 9, reproduced below, is further illustrative of the claimed subject matter:

9. A method for shutting down an internal combustion engine, comprising:

stopping the engine in a predetermined rest position wherein the predetermined rest position is such that motoring torque is decreasing during the first phase of restart; and

locking the engine in said predetermined rest condition via a locking mechanism.

The references of record relied upon by the Examiner as evidence of obviousness are:

Janczak	US 5,070,266	Dec. 3, 1991
Downs	US 6,453,864 B1	Sep. 24, 2002

Claims 9-11 stand rejected under 35 U.S.C. § 103 as unpatentable over Janczak in view of Downs.

ISSUE

The sole issue for consideration on appeal is whether the Appellants have established that the Examiner has erred in rejecting claims 9-11 as prima facie obvious.

FINDINGS OF FACT

Janczak discloses an apparatus and method for locking a motor in position. Janczak differs from the claimed subject matter in that Janczak does not teach the predetermined starting position.

Downs teaches a method of stopping an engine at a predetermined rest position wherein, when the engine is restarted, compression vibration is reduced. Downs stops the engine on the intake or exhaust stroke of the engine. See col. 4, ll. 25-30. Downs does not teach stopping the engine where the absolute restarting torque is at a minimum.

PRINCIPLES OF LAW

A claimed invention is unpatentable if the differences between it and the prior art are “such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art.” 35 U.S.C. § 103(a) (2000); *KSR Int’l v. Teleflex Inc.*, 127 S.Ct. 1727, 1734 (2007); *Graham v. John Deere Co.*, 383 U.S. 1, 13-14 (1966).

In *Graham*, the Court held that that the obviousness analysis is bottomed on several basic factual inquiries: “[1] the scope and content of the prior art are to be determined; [(2)] differences between the prior art and the claims at issue are to be ascertained; and [(3)] the level of ordinary skill in the pertinent art resolved.” 383 U.S. at 17. *See also KSR Int’l v. Teleflex Inc.*, 127 S.Ct. at 1734. “The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *Id.*, at 1739.

While there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness, “the analysis

need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR* 127 S.Ct. at 1741.

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.

Id., at 1740. We must ask whether the improvement is more than the predictable use of prior art elements according to their established functions.

Id.

ANALYSIS

The Examiner cites col. 4, ll. 25-30 of Downs as disclosing or teaching stopping the engine in a predetermined position where the motoring torque is decreasing during the first phase of restart. Downs, as noted above in our Findings, stops the engine within about 60° before or after TDC before the intake valve closes for the intake stroke. This is out of phase with the position disclosed by Appellants as resulting in a decreasing torque requirement during the first phase of restart, i.e., about -45° before the TDC of the *compression stroke*.

Appellants argue that Downs addresses a different problem and that Downs is silent with respect to the motoring torque required in relation to the stopping position of an engine. We are in agreement with Appellants on both points. But it is the second point which is crucial to our decision in this case. The Examiner admits that Downs does not teach an absolute reduction in cranking torque. Answer at 7. In fact, Downs is silent as to when motoring torque is reduced or decreasing during the first phase of restart. The Examiner further admits that Downs does not show charts or graphs as to cranking torque as Appellants have. But the Examiner argues that resting the engine in the position where motoring torque is decreasing during the first phase of restart is inherent in the method disclosed in Downs. *Id.*

Under principles of inherency, when a reference is silent about an asserted inherent characteristic, it must be clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1268 (Fed. Cir. 1991). As the court stated in *In re Oelrich*, 666 F.2d 578, 581 (CCPA 1981) (quoting *Hansgirg v. Kemmer*, 102 F.2d 212, 214 (CCPA 1939)):

Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient. [Citations omitted.] If, however, the disclosure is sufficient to show that the natural result flowing from the operation as taught would result in the performance of the questioned function, it seems to be well settled that the disclosure should be regarded as sufficient.

In this situation it is apparent to us that the Examiner's case of inherency in the disclosure of Downs is based on speculation and conjecture. We are of the view that the Examiner has not established that the motoring torque of Downs on the restart of Downs from the position described in col. 4, ll. 25-30 is necessarily decreasing during the first phase of restart. The Examiner's burden is an exacting one. The jurisprudence is such that a mere possibility or probability is insufficient to establish inherency. Inherency certainly is not established by conjecture or speculation. Accordingly, since Downs fails to teach or establish the rest position claimed by Appellants, the combination of Downs and Janczak fails to establish the obviousness of the claimed subject matter.

CONCLUSION

The rejection of claims 9-11 under 35 U.S.C. § 103 is REVERSED.

REVERSED

hh

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